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United States Patent [19]**Sawyer**[11] **Patent Number:** **5,156,613**[45] **Date of Patent:** **Oct. 20, 1992**[54] **COLLAGEN WELDING ROD MATERIAL FOR USE IN TISSUE WELDING**[75] **Inventor:** Philip N. Sawyer, Brooklyn, N.Y.[73] **Assignee:** Interface Biomedical Laboratories Corp., Brooklyn, N.Y.[21] **Appl. No.:** 654,860[22] **Filed:** Feb. 13, 1991[51] **Int. Cl.⁵** A61B 17/00[52] **U.S. Cl.** 606/213; 606/8; 606/214; 606/40; 128/898[58] **Field of Search** 606/213, 214, 215, 3, 606/8, 27; 128/898; 514/801[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57]

ABSTRACT

A method of joining or reconstructing biological tissue which comprises applying optical energy to the biological tissue while providing a collagen filler material thereto; denaturing the collagen filler material and biological tissue with the optical energy to cause joining of the collagen filler material and biological tissue, thus joining or reconstructing such tissue.

20 Claims, 2 Drawing Sheets